

What is claimed is:

1. A method of manufacturing an endoluminal stent capable of radially expanding from a first diameter to a second diameter, comprising the steps of:
  - a. providing a substrate having an exterior surface capable of accommodating metal deposition thereupon;
  - b. depositing a stent-forming metal onto the substrate by a vacuum deposition method;
  - c. removing the substrate from the endoluminal stent formed thereupon.
2. The method according to Claim 1, wherein step (a) further comprises the step of imparting a pattern onto the exterior surface of the substrate.
3. The method according to Claim 2, wherein step (b) further comprises the step of depositing the stent-forming metal onto the pattern onto the substrate.
4. The method according to Claim 1, further comprises the step of depositing a sacrificial layer of a material onto the substrate prior to step (b).
5. The method according to Claim 1, wherein step (b) is conducted by ion beam-assisted evaporative deposition.
6. The method according to Claim 1, wherein step (b) is conducted by sputtering.

7. The method according to Claim 5, wherein the ion beam-assisted evaporative deposition is conducted in the presence of an inert gas.
8. The method according to Claim 1, wherein the substrate is a cylindrical substrate.
9. The method according to Claim 1, wherein the substrate is a planar substrate.
10. The method according to Claim 7, wherein the inert gas is selected from the group consisting of argon, xenon, nitrogen and neon.